

REMARKS

Favorable reconsideration of this Application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-10, 11-19 and 21-41 remain pending in the present application. Claims 1-3, 7, 8, 12, 13, 18 and 21-37 have been amended to address cosmetic matters of form and to incorporate cancelled subject matter. Claims 11 and 20 are cancelled without prejudice or disclaimer. No new matter has been added.

By way of summary, the Official Action presents the following issues: Claims 1-5, 13-15, 18, 19, 22, 30, 33, 40 and 41 are rejected under 35 U.S.C. § 103 as being unpatentable over Hogan (U.S. Patent No. 5,828,754) in view of Furuta et al. (U.S. Patent No. 6,876,607, hereinafter "Furuta"); Claims 7-10, 16 and 17 are rejected under 35 U.S.C. § 103 as being unpatentable over Hoga in view of Furuta and further Ido et al. (U.S. Patent No. 5,852,520, hereinafter "Ido"); Claims 11 and 12 are rejected under 35 U.S.C. § 103 as being unpatentable over Hogan in view of Furuta and Ido and further Kurashina et al. (U.S. Patent No. 6,661,763, hereinafter "Kurashina"); Claims 20, 21 and 25 are rejected under 35 U.S.C. § 103 as being unpatentable over Hogan in view of Furuta and further Kurashina; Claims 23, 24, 27, 31-35, 38 and 39 are rejected under 35 U.S.C. § 103 as being unpatentable over Hogan in view of Furuta and further Takagi et al. (U.S. Patent No. 4,879,704, hereinafter "Takagi"); Claim 26 is rejected under 35 U.S.C. § 103 as being unpatentable over Hogan in view of Furuta and Kurashina and further Yeo (U.S. Patent No. 6,621,781); Claims 6, 28, 29 and 34 are rejected under 35 U.S.C. § 103 as being unpatentable over Hogan in view of Furuta and Yeo; and Claims 36 and 37 are rejected under 35 U.S.C. § 103 as being unpatentable over Hogan in view of Furuta and Takagi and further Yeo.

As Applicants have incorporated the subject matter of cancelled Claim 11 into all independent claims, Applicants respectfully submit that all outstanding rejections with the exception of the rejection pertaining to Claim 11, have been rendered moot. As such, Applicants only address the rejection outlined at paragraph 4 of the Official Action which pertains the subject matter of cancelled Claim 11.¹

REJECTION UNDER 35 U.S.C. § 103

The outstanding Official Action has rejected Claims 11 and 12 under 35 U.S.C. § 103 as being unpatentable over Hogan, Furuta, Ido and further in view of Kurashina. The Official Action contends that the combination of Hogan, Furuta and Ido describes all the Applicant's claimed features with the exception of providing connection bits to a predetermined region of a disc which is not a synchronous signal area. However, the Official Action cites Kurashina as describing this more detail aspect of the Applicants' claimed advancement and states that it would have been obvious to one of ordinary skill in the art at the time the advancement was made to combine the cited references for arriving at the Applicants' claims.² Applicants respectfully traverse the rejection.

Applicants' amended Claim 1 recites, *inter alia*, a recording method including:

... selecting predetermined connection bits that are placed between two sequences of modulated data, each sequence corresponding to the predetermined unit, so that the absolute value of a DSV increases in only a predetermined region of a disc,
wherein the disc has a recording area including a synchronous signal area and a data area, and said predetermined region is the data area.

Hogan describes an encoder to inhibit copying of digital data. When a CD is created, EFM modulation (eight to fourteen modulator) converts each set of eight data bits into a code

¹ See Official Action at pages 8-9.

² Applicants will treat this rejection as if it applies to pending Claims 1-9, 11-19 and 21-41.

symbol of fourteen channel bits. Three connection bits are added between two sequences of 14 channel bits. Hogan augments the data sequences with contrived sequences large enough to cause a large accumulated DSV (digital sum variance) but prevents such an accumulation with a special encoder that chooses non-optimal sequences of the data. When the resulting CDs are re-encoded with standard encoders that do not artificially keep the accumulated DSV low, the resulting copies have sequences that cause large accumulated DSV that results in a read error.³

The Official Action has cited Furuta and Ido as describing further aspects of the Applicants' claimed advancements. However, neither Furuta nor Ido are cited as describing or suggesting the provision of predetermined connection bits that are placed between two sequences of modulated data, each sequence corresponding to a predetermined unit so that the absolute value of DSV increases in only a predetermined region of a disc wherein the disc has a recording area including a synchronous signal area and a data area, and the predetermined region is the data area. The Official Action notes at page 9 that neither Hogan, Furuta, nor Ido describe these features. However, the Official Action cites Kurashina as describing these more detailed aspects of the Applicants' claimed advancements.

Kurashina describes as Figure 2, 8/14 EFM modulation. For example, one frame of this modulation format is shown in Figure 2 to include a synchronous pattern area (101) in addition to program data area (103).

As can be appreciated from the review of Figure 2 of Kurashina, the identified synchronous area (101) and the data area (103) are with respect to a frame of data. In other words, this figure does not illustrate disc recording areas, but, frame formatting of data. Moreover, Kurashina does not describe any means by which DSV values are changed or the

³ Hogan at Figure 1 and column 5, lines 1 through 10.

provision of connection bits in the manner claimed. Thus, incorporating the teachings of Kurashina into Hogan, Furuta, and Ido will simply add EFM modulation teachings to this combination of references.

Accordingly, as none of the combined references, either alone or in combination, describe selecting predetermined connection bits and placing these bits between two sequences of modulated data, each sequence corresponding to a predetermined unit, so that the absolute value of the DSV increases in only a predetermined region of the disc, wherein the disc has a recording area including a synchronous signal area and data area, and said predetermined region is the data area, as recited in the Applicants' amended Claim 1 or any claims depending therefrom, Applicants respectfully submit these claims are allowable over the cited combination of references. Likewise, as independent Claims 13, 18, 22, and 30 recite substantially similar limitations to that discussed above, Applicants respectfully submit that these claims and any corresponding dependent claims are likewise allowable. Therefore, Applicants respectfully request that the rejection of these claims under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Consequently, in view of the foregoing amendments and remarks, it is respectfully submitted that the present Application, including Claims 1-9, 11-19 and 21-41, is patently distinguished over the prior art, in condition for allowance, and such action is respectfully requested at an early date.

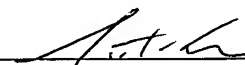
Respectfully submitted,

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